

REMARKS

This application has been carefully studied and amended in view of the Office Action dated December 27, 2007. Reconsideration of that rejection is requested in view of the following.

Claims 1-18 had been rejected under 35 U.S.C. 112. In that rejection Examiner Robinson specifically referred to the language in Claim 3 as being objectionable by referring to the use of a specific machine for measuring the static shear strength. It was understood by the undersigned attorney from a brief telephone conference with Examiner Robinson on December 31, 2007, that such amendment could be avoided by canceling Claim 3. Accordingly, Claim 3 has now been canceled.

Reconsideration is respectfully requested of the rejection of Claims 1-2 and 4-17 as being unpatentable over Cushner et al. (U.S. 5,916,403) in view of Schober et al. (U.S. 4,758,500). The Examiner's argument is essentially as follows:

Cushner teaches all steps (a)-(h) of the inventive process except for the diagonal cut (bevel cut) applied in steps (b) and (e). However, Schober discloses such a diagonal cut at the edges of the printing plate or printing elements to be joined.

Applicants respectfully disagree. The Examiner's attention is drawn to step (g) of the inventive process of Claim 1, i.e., the step of "joining the cut edges at a temperature below the melting point of the photopolymerizable layer by bringing the surface of the photopolymerizable layer on the hollow cylinder into contact with a rotating calendar roll until the cut edges are joined to one another".

Cushner teaches a completely different approach for forming a seamless cylindrical photosensitive element on a flexible sleeve. According to Cushner, a molten stream, or a molten or solid sheet of photopolymerizable material is supplied onto the sleeve supported by a mandrel, and the molten photopolymerizable material is calendared on the sleeve to have a substantially constant thickness of the sleeve (See Claim 1 of Cushner). There are two different embodiments

exemplified in the working examples of the Cushner method. In example 1, a photopolymerizable layer is applied to a polyester sleeve, rotated between the calendar rolls and the mandrel with the sleeve on its surface to heat, soften, melt, spread, and calendar the photopolymerizable layer. See column 20, lines 4 to 8 of Cushner. According to example 3, a photopolymerizable hot melt is extruded onto the sleeve, with the sleeve being rotated on the mandrel, and the sleeve coated with the extruded hot melt by calendaring. See column 23, lines 20 to 25 of Cushner.

In order to obtain a seamless cylindrical photosensitive element, the Cushner method comprises the further step of moving the sleeve around and along the longitudinal axis of the mandrel in a helical fashion to polish the outer circumferential surface of the element to a seamless uniform state (see Claim 1).

Quite to the contrary, according to the present invention, the cut edges of the photopolymerizable layer are joined together in a non-molten state by (i) applying a bevel cut, and (ii) contacting with a rotating calendar roll until the cut edges are joined to one another.

Cushner neither teaches nor suggests step (b) nor step (g) of the inventive process of Claim 1. What is more, step (e) of the inventive process of Claim 1 requires that the laminate being “cut to size”, and the ends provided with a bevel cut substantially resting against one another but not overlapping. According to Cushner, the ends of the photopolymerizable layer – if a sheet of photosensitive material is employed instead of a hot melt – either have a substantial gap or a substantial overlapping portion (see Figures 2A and 2B). See also example 1. The circumference of the sleeve is $(8.9\text{cm} + 0.1\text{ cm}) \times 3.14 = 30.72\text{ cm}$. The sheet of the photopolymerizable layer used has only 15.3 by 25.4 cm. Consequently, there is a gap of greater than 5 cm. Consequently, the ends of the photopolymerizable layer are not “resting against one another”, as required by step (e), and are not “joined to one another”, as required by step (g) of the inventive process of Claim 1.

Schober likewise does not teach or suggest step (g) of the inventive process of Claim 1. According to Schober an adhesive is employed, and the cut edges are cemented together. See

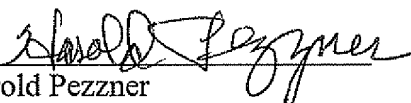
Claim 1 of Schober. The Schober reference is related to particular adhesives for cementing together the edge of photopolymerizable flexographic printing elements, the adhesives having the same elastic properties as the photopolymeric material (column 2, lines 41-46 of Schober). Schober does not teach or suggest the step of joining the cut edges at a temperature below the melting point of the photopolymerizable layer by calendaring. Therefore, if Cushner and Schober are hypothetically combined, even the combined references do not teach or suggest all steps of the inventive process of Claim 1.

Since the remaining Claims 2 and 4-17 as well as Claim 18 (which had been rejected over Cushner in view of Schober and further in view of Bode) are all dependent on Claim 1, these claims should be allowed not only for the features added by the claims, but also by virtue of their dependency on Claim 1.

In view of the above remarks and amendments this application should be passed to issue.

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